

REMARKS

Favorable reconsideration is respectfully requested.

The claims are 15-21.

The above amendment is responsive to points set forth in the Official Action. Support for the above amendment can be found on page 9, lines 13-15 of the present specification.

The significance of this amendment will become further apparent from the remarks below.

With regard to the Election/Restriction Requirement, Applicants continue to maintain that this requirement is improper. However, it is expected that upon allowance of the present claims, the Examiner will expand his search to include other species as required by 37 C.F.R. 1.141 and MPEP § 809.02(a).

Thus, it is respectfully requested that upon allowance e.g. claim 15, the Examiner will expand his search to consider all of the species of claims 16 and 17.

Claims 15-17 have been rejected under 35 U.S.C. 102(e) as being anticipated by Kim et al. (US 6,627,238).

The rejection alleges that by consuming the food of Kim (i.e. containing the browning reaction product) one would be inherently inhibiting *Helicobacter pylori*.

This rejection is respectfully traversed.

Claim 15 now recites a method comprising administering an effective amount of a food comprising 0.5% by mass or more of a browning product. Since the browning product has taste, smell and color, foods which were known prior to the present invention would not be expected to contain such a large amount of browning product, particularly as will now be explained.

Kim et al. discloses a browning composition for foods, more particularly, a coating composition for food to provide cooked product having a desirable browned crust (see FIELD OF THE INVENTION). Kim et al. describes that “the composition is coated onto the surface of the dough crust in an amount of about 0.008 to 0.02 gm/sq. cm.” Please see column 2, lines 55-58. It can be readily seen that foods disclosed in Kim et al. do not comprise 0.5% by mass or more of a browning product.

In this regard, Hirano et al. (Biosci. Biotech. Biochem., 60 (5), 877-879, 1996), copy enclosed, discloses that foods known to comprise a browning product actually comprise 31.3 µg/g (0.00313%) of a browning product at most. Please see the Table on page 878.

Before the present inventors found that a browning product can inhibit the *Helicobacter pylori* adhesion, a food comprising 0.5% by mass or more of a browning product did not exist and hence could not be administered. Therefore, claims 15-17 are not anticipated by Kim et al.

Claims 15-21, remain rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al. in view of Kodama et al. (US 6,828,298).

The rejection alleges that one of ordinary skill in the art would have had a reasonable expectation that by combining the browning reaction between sugar and protein (of Kim) and the glycoprotein and gastric acid secretion inhibitor composition (of Kodama) with a food product, one would gain added benefits for a *Helicobacter pylori* adhesion inhibitor.

This rejection is also respectfully traversed.

Kodama et al. disclose a glycoprotein composition for inhibiting *Helicobacter pylori* colonization.

However, it is common knowledge of a person skilled in the art that a browning product and a glycoprotein are very different, not only in chemical structure, but also in biological activity. Therefore, a person skilled in the art would not have been motivated to use a browning product for inhibiting *Helicobacter pylori* adhesion.

For example, heparin and heparan sulfate, which are known as anticoagulants, are proteoglycans (i.e. glycoproteins). Heparin specifically inhibits a blood coagulation factor, such as thrombin and factor X, and inhibits blood coagulation. MHC (major histocompatibility complex) is also a glycoprotein. MHC selectively binds to a certain antigen, then the antigen is presented on the surface of an antigen presenting cell to be bound by a T cell. Antibody (immunoglobulin) is also a glycoprotein. Immunoglobulin specifically binds to certain antigen. The antigen bound by the immunoglobulin is subject to cell immunity and is inactivated and degraded. Due to these biological functions of the glycoproteins, antigens foreign to an organism are specifically removed without adversely affecting the organism.

It has never been reported that the browning product has those biological activities.

On the other hand, as described in Hirano et al. (supra), the browning product (i.e. melanoidin) has been found to have some physiological effects similar to dietary fiber; shortening of intestinal transition time, lowering blood cholesterol, improving sugar tolerance and reinforcing the microfloral lactic group in the population, as well as a significant inhibitory effect on trypsin. See page 877, left column, the last paragraph. A person skilled in the art would understand that these known biological activities of a browning product are very different from those of a glycoprotein in kind.

A person skilled in the art would not have had a reasonable expectation from the cited references, alone or combined, that a browning product whose biological activity was very different from that of a glycoprotein could be used as a *Helicobacter pylori* adhesion inhibitor.

Further, the cited references make no mention of treating any specific disease by the present method and thus do not disclose or suggest administering the recited composition to a patient having such disease, as recited e.g. in claim 20.

The rejection under 35 U.S.C. 103 employs what is alleged to be an inherent teaching of Kim. However, it is improper to base an obviousness rejection on inherency. These are two completely different concepts. See *In re Rinehart*, 189 U.S.P.T.O. 143 at 148[9] (CCPA1976).

Lastly, it is not apparent where there is motivation to combine these very different references nor would such combination lead to the present invention.

In sum, the rejection, at best, constitutes an improper hindsight reconstruction of the present invention and should be withdrawn.

An Information Disclosure Statement accompanies.

No further issues remaining, allowance of this application is respectfully requested.

If the Examiner has any comments or proposals for expediting prosecution, please contact undersigned at the telephone number below.

Respectfully submitted,

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